

We claim:

1. A process for the preparation of anionic clays wherein an aluminium source and a magnesium source are reacted in aqueous suspension to obtain an anionic clay, the aluminium source comprising two types of aluminium-containing compounds wherein one type of aluminium-containing compound is aluminium trihydrate or its thermally treated form.
2. A process according to claim 1 wherein the aluminium source comprises aluminium trihydrate.
3. A process according to claim 1 or 2 wherein the aluminium source comprises thermally treated aluminium trihydrate.
4. A process according to any one of claims 1-3 wherein the aluminium source comprises aluminium trihydrate and thermally treated aluminium trihydrate.
5. A process according to any one of claims 1-4 wherein the magnesium source is magnesium oxide and/or $Mg(OH)_2$ and/or $MgCO_3$.
6. A process according to any one of claims 1-5 wherein the reaction takes place at a temperature between 0 and 100 °C at or above atmospheric pressure.
7. A process according to any one of claims 1-8 wherein the reaction takes place at a temperature above 50 °C at or above atmospheric pressure.

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8. A process according to any one of claims 1-9 wherein the reaction is conducted at a temperature above 100 °C and increased pressure.

5 9. A process according to any one of claims 1-10 wherein metals or non-metals are fed to the reactor.

10. A process according to claim 11 wherein the metals or non-metals are added to an aluminium source slurry.

10 11. A process according to claim 11 wherein the metals or non-metals are added to a magnesium source slurry.

15 12. A process according to any one of claims 1-11 wherein the anionic clay is subjected to an ion-exchange treatment.

13. A process according to any one of claims 1-12 wherein the anionic clay is ion exchanged with pillaring anions such as $V_{10}O_{28}^{6-}$ and $Mo_7O_{24}^{6-}$.

20 14. A process according to any one of claims 1-13 wherein metals or non-metals are deposited on the anionic clay.

25 15. A process for the preparation of a Al-Mg-containing solid solution and/or spinel, wherein an anionic clay obtained by any one of the processes of claims 1-15 is subjected to a heat-treatment at a temperature between 300 and 1200 °C.

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